

REMARKS

Claims 1-5 are all the claims pending in the application.

Reconsideration and removal of the rejection of claims 1-5 under 35 U.S.C. § 103(a) as unpatentable over Wang (IEEE article submitted by app.) in view of McGlone (U.S. Patent No. 6,037,776) and Dahlberg (U.S. Patent No. 5,747,997) are respectfully requested on the basis of the present amendment to the claims and the following remarks.

Claims 1-5 are rejected under 35 U.S.C. § 112, 2nd paragraph, as being indefinite. Specifically, the Examiner objects to the term “guaranteed storage temperature” as being unclear. Applicants amend claim 1 to remove the language “guaranteed” from the claim. This amendment is believed to overcome the indefiniteness rejection; and therefore, Applicants request the Examiner to withdraw this rejection.

With respect to the prior art rejection, the Examiner rejects claims 1-5 under 35 U.S.C. § 103(a) as being obvious based on a combination of Wang or Kano in view of McGlone or Dahlberg. In particular, the Examiner asserts that each of the secondary references, McGlone and Dahlberg, makes up for the teachings of Wang or Kano by teaching the concept of providing GMR sensors on vehicles. Hence, the Examiner asserts that it would have been obvious to employ the GMR sensor of Wang or Kano in the vehicles of McGlone or Dahlberg at the desired temperatures where McGlone discloses the desirability of GMR sensors in general for detection. For at least the following reasons, Applicants traverse this rejection.

As a preliminary matter, Applicants amend claim 1 to more thoroughly recite the features of the present invention. Applicants note that this amendment is supported by the original disclosure at, for example, page 12, first paragraph, and page 20, last paragraph.

Accordingly, claim 1 recites, *inter alia*, “wherein said magnetoresistive sensor has a magnitude of a magnetic field of equal to or more than 100 Oersteds at a point where an integral of magnetoresistance ratio occupies 90% of a total magnetoresistance ratio in a magnetoresistance curve.” With respect to the § 103 rejection, Applicants submit that the applied references, either alone or in combination, do not disclose or suggest at least this recitation.

Additionally, the limited magnetic field of the present invention provides superior effects (see page 20, last paragraph). Furthermore, the present invention is directed particularly to a sensor for vehicle mounting. However, contrary to the claimed invention, the primary references, Wang and Kano, do not disclose or suggest adopting sensors thereof to a vehicle.

Applicants submit that a magnetoresistive sensor for vehicle mounting must have the following properties (see pages 2-4):

- (i) The sensor must have good storage and operation properties under high temperature conditions (for example 150°C or more); and
- (ii) The sensor must have resistant to a disturbance magnetic field under high temperature conditions.

Applicants submit that the claimed limited magnetic field satisfies such requirements.

In comparison, Applicants submit that the primary reference, Wang, does not disclose the limited magnetic field.

On the other hand, the primary reference, Kano, provides heat resistance by using the specific base plate and additional elements rather than by adopting a specific Ni-Fe-Co ratio, as in the present invention. Although Kano, which discloses such a broad range of Ni-Fe-Co ratios, arguably may include the specific Ni-Fe-Co ratio of the present invention, in each of the examples of Kano, all of the disclosed ratios are outside of that of the present invention. That is, in Examples 1, 2, 3, 7, and 9 of Kano, $\text{Fe}_{20}\text{Ni}_{45}\text{Co}_{35}$ is used, and in Examples 4, 5, 10, of Kano, $\text{Fe}_{22}\text{Ni}_{78}$ is used. This is because Kano aims at obtaining the heat resistance by using the specific base plate and additional elements. In view of the comparative Example 2 of the present invention, although the experiment uses a sensor similar to the Kano Examples ($x=20$, $Y=65$, $z=15$), poor results for vehicle use are obtained.

Therefore, Applicants submit that it would have been difficult to combine the primary references, Wang and Kano, with the secondary references McGlone and Dahlberg, considering the above superior effects of the present invention. As such, Applicants submit that it would not have been obvious to combine Wang and Kano with McGlone and Dahlberg to arrive at the claimed invention, and therefore, requests the Examiner to withdraw the § 103 rejection of claims 1-5.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

AMENDMENT UNDER 37 C.F.R. § 1.111
Appln. No.: 09/996,580

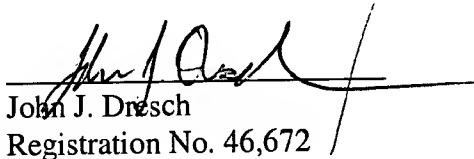
Attorney Docket No.: Q66805

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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